

## CLAIMS

What is claimed is:

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1 A method for reducing transmission bandwidth requirements of a portable image capture device, the image capture device including means for establishing a communications connection on a network, the method comprising the steps of:

- (a) assigning an image identifier to captured images uploaded to a server on a network, wherein each of the images are stored in an image file, each of the image files having a particular size; and
- (b) in response to a user request to apply an action to one of the uploaded images, transmitting the image identifier of the image and the requested action to the server, thereby eliminating the need to retransmit the image and reducing transmission bandwidth.

2 The method of claim 1 further including the step of:

- (c) reducing the size of each of the image files corresponding to the uploaded images on the image capture device, thereby reducing storage requirements.

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3 The method of claim 1 wherein step (a) further includes steps of:

- (i) uploading the image identifiers with the captured images.

4 The method of claim 2 wherein step (c) further includes step of:

(i) deleting at least a portion of each of the image files.

5 The method of claim 4 further including the step of storing each of the  
5 captured images in an image file that includes a high resolution image, a reduced  
resolution image, and audio, wherein step (b) further includes the step of:

(ii) replacing the high resolution image with the reduced resolution  
image.

6 The method of claim 5 wherein step (c) further includes the step of:

(iii) deleting the audio if audio has been recorded for the image.

7 The method of claim 6 wherein step (c) further includes the step of:

(iv) if the audio has been deleted, then marking an "audio present"  
tag in the reduced image.

8 The method of claim 1 further including the step of:

(c) replacing each of the uploaded images with an alias that includes the  
image identifier assigned to the uploaded image.

9 A method for reducing bandwidth requirements of a portable image capture  
device, the image capture device including means for establishing a  
communications connection on a network, the method comprising the steps of:

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- (a) assigning an image identifier to a captured image;
  - (b) transmitting the image and the image identifier from the image capture device to a server on the network for storage;
  - (c) marking the image as sent in the image capture device;
  - (d) in response to a user request to perform an action on a selected image, determining if the selected image is marked; and
  - (e) if the selected image is marked, uploading the image identifier to the server, wherein the server performs the action on the image identified by the image identifier, thereby eliminating the need to retransmit the image.

10 The method of claim 9 further including the step of reducing storage requirements of the image capture device by:

- (f) deleting the image from the image capture device.

15 11 The method of claim 9 further including the step of reducing storage requirements of the image capture device by:

- (f) replacing the image with a reduced image on the image capture device, the reduced image having a size substantially less than the size of the image.

20 12 The method of claim 11 further including the step of storing the image in an image file that includes a high resolution image, a reduced resolution image, and

audio, wherein step (f) further includes the step of:

- (i) deleting the high resolution image and the audio if audio has been recorded for the image.

5 13 The method of claim 12 wherein step (f) further includes the step of:

- (ii) if the audio has been deleted, then marking an "audio present" tag in the reduced image.

14 A system for reducing storage and bandwidth requirements, comprising:  
an online photo-sharing service for receiving digital images over a network; and

an image capture device for capturing digital images, the image capture device including,

means for establishing a network connection,

means for assigning an image identifier to each of the digital images;

means for transmitting the digital images and the respective image

identifiers from the image capture device to the server for

storage;

means for marking the digital image as sent;

means responsive to a user requests to perform an action on a

selected image for determining if the selected image is marked;

and

means responsive to the selected image being marked for uploading

the selected image's image identifier and the action to the server, thereby eliminating the need to retransmit the image.

15 The system of claim 14 wherein each of the digital images are stored in the  
5 image capture device as an image file, each of the image files including image  
data, reduced resolution image data, and metadata tags.

16 The system of claim 15 wherein each of the transmitted digital images are  
replaced with reduced image files on the image capture device by deleting the  
10 image data from the image file.

17 The system of claim 16 wherein the images files further include an audio  
clip, the audio clip also being deleted when generating the reduced image files.

15 18 The system of claim 17 wherein when the reduced image files are  
generated, the image capture unit determines whether a maximum number of  
images files are present, and If the maximum number of images has been reached,  
then the oldest images are deleted to further increase storage capacity.

20 19 The system of claim 14 wherein once the server receives the image identifier  
and the action, the server applies the action to the digital image identified by the  
image identifier.

20 The system of claim 19 wherein the server uses the image identifier to index and store the digital image.

21 The system of claim 20 wherein if the action requires retrieving the stored image, the server uses the image identifier sent with the action to retrieve the stored image.

22 A method for reducing storage and transmission bandwidth requirements of a portable image capture device, the image capture device including means for establishing a communications connection on a network, the method comprising the steps of:

- (a) receiving captured images uploaded from the image captured device to a server on the network;
- (b) assigning an image identifier to the uploaded images by the server;
- (c) downloading the image identifiers to the image capture device for association with the corresponding uploaded image; and
- (d) receiving a request from a user to apply an action to one of the uploaded images, wherein the request only include the image identifier of the image and the requested action, thereby eliminating the need to retransmit the image and reducing transmission bandwidth.

23 The method of claim 22 wherein step (c) further includes the step of:

- (i) sending the image identifiers to the image capture device to acknowledge receipt of the uploaded images.

5 24 The method of claim 23 wherein each of the images are stored in an image file, each of the image files having a particular size, step (c) further including the step of:

- (ii) after receiving the image identifiers on the image capture device, reducing the size of each of the image files uploaded to the server, thereby reducing storage requirements.

25 The method of claim 24 wherein step (c) further includes the step of:

- (iii) reducing the size of each file by deleting at least a portion of the image file.

26 The method of claim 25 wherein step (c) further includes the step of:

- (iv) reducing the size of each file by deleting audio from the image file.

27 The method of claim 26 wherein step (d) further includes the steps of:

- (i) receiving a request from the user to listen to audio corresponding to the uploaded image;
- (ii) using the uploaded image identifier to retrieve the audio

corresponding to the uploaded image; and

- (iii) downloading the retrieved audio to the image capture device for playing.

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The method of claim 27 wherein step (d) (ii) further includes the step of:

- (i) encoding the audio into a higher compression format on the server to make the audio smaller for downloading and playing, but without a noticeable loss of quality.

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The method of claim 22 wherein step (d) further includes the steps of:

- (i) receiving a request to download a selected image;
- (ii) using the image identifier to retrieve the selected image; and
- (iii) downloading the selected image.

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The method of claim 29 wherein step (d) (i) further includes the steps of:

- (1) receiving a password with the selected image; and
- (2) only retrieving the selecting image if the password is verified.

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The method of claim 29 wherein step (d) (i) further includes the steps of:

- (1) receiving a signature key with the selected image; and
- (2) only retrieving the selecting image if the signature key is verified.



32 The method of claim 22 wherein step (d) further includes the steps of:

- (i) receiving a request to delete a selected image; and
- (ii) determining on the image capture device if the uploaded image on the image capture device should be deleted along with the selected image on the server.

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